Recommendations for carbon market design

Submitted to ETAAC May 31, 2007 by Mike Sandler, Climate Protection Campaign

1) Regulate fossil fuels *upstream* at the Terminal Rack

· Upstream is administratively easier.
· AB32 calls for a market that is comprehensive.
· The Terminal Rack includes transportation fuels: 50% of CA emissions.
· Fuels are already tracked at the Terminal Rack.
· Permits would be required to be held only by fossil fuel producers and importers. Other (downstream) businesses would still receive the price signal in proportion to their fuel use, but would not need to hold permits or participate in complex reporting and compliance.

2) Auction 100% of the permits

· New York, Massachusetts, Vermont, and others are auctioning 100%.
· Revenues from auctioning may be used for public goods investments for further emission reductions, to fund administration and enforcement of the cap, and for per capita rebates or dividends.
· Previous cap and trade systems such as RECLAIM and the ETS have shown the problems with a giveaway. Auctioning avoids windfall profits and preferential treatment, and rewards early action.
· Every business is treated equally, and the correct number of permits are allocated.
· By contrast, grandfathering only benefits special interests seeking preferential treatment.

3) Per capita compensation to Californians

· If limiting carbon emissions raises fossil fuel prices, consumers can be partly shielded from impacts by distributing per capita 'dividends' or 'shares.'
· Mitigating higher prices will help consumers and low-income households particularly.
· A per capita approach is based on the principle that the sky is a commons we all share.

A per capita rebate/dividend/share:

· Reimburses consumers for increased prices
· Helps low-income communities and environmental justice concerns
· Avoids complicated or subjective set-asides (for low-income or special groups) and still accomplishes the same goal: proportionate impacts as we reduce emissions
· Can easily be adopted by other states or countries
· Per capita framework may engage developing countries after the Kyoto Protocol expires in 2013.

Carbon Share is a project of the Climate Protection Campaign
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Cap and Trade: RECLAIM and the ETS

The Market Advisory Committee is analyzing market mechanisms, and will produce a report advising the State on how to approach market-based measures. At their first meeting, they decided to confine their study to cap and trade.

In a cap and trade system, emissions are capped, rights are distributed, and the market sets a price for carbon. Two well-documented previous systems were RECLAIM and the ETS. Both offer lessons and experience in designing California's statewide cap.

RECLAIM

The Regional Clean Air Incentives Market (RECLAIM) was created by the Southern California South Coast Air Quality Management District in 1994 to allow companies to cap and trade criteria pollutants. Community groups such as Healthandcleanair.org describe the following problems with RECLAIM:

- It gave away permits for free to historic large emitting companies
- Permits were given based on estimates, not actual emissions (the Air District was said to have inflated baselines and allowed imported credits from outside the area)
- too many loopholes and exemptions to the cap
- the frequent use of safety valves (the Air District was said to have pre-empted the market from functioning by allocating additional credits whenever companies complained of price increases)

ETS

The European Emissions Trading System (ETS) began operation in 2005. The ETS covers about 43% of European emissions in 6 sectors. Companies in certain sectors such as electricity and cement which emitted above a given threshold were allocated permits. However, the ETS has faced the following problems:

- The price of permits plummeted after it became known that too many permits had been allocated.
- Even though permits are allocated freely to companies, they still passed on costs to consumers
- Free allocation of permits to selected companies led to windfall profits for those companies.
- Since too many permits were allocated, few emissions reductions resulted.
- Free allocation to established firms prevented new, cleaner firms from entering the market.
- The choice to regulate mid-stream facilities forced some hospitals, who were not allocated permits, to buy permits from coal companies, who were.

Sources from Deutsche Bank to Citigroup to The Economist (October 19, 2006), have stated that the ETS has had problems because "allowances were handed out free to companies, rather than being (as economists wanted) auctioned." In Phase 3 (2012-2017) the EU may increase the percentage of auction from a mere 5% to closer to 100%. Another option, described by a European group called Cap and Share, is initial allocation to consumers on a per capita basis.

Lessons for California:

Based on an evaluation of previous cap and trade systems, the Climate Protection Campaign has submitted a list of suggestions to the Market Advisory Committee including:
1) Regulate fossil fuels upstream,
2) Auction (or sell) 100% of emission permits, and
3) Use revenues for public goods and to compensate consumers for increased prices.

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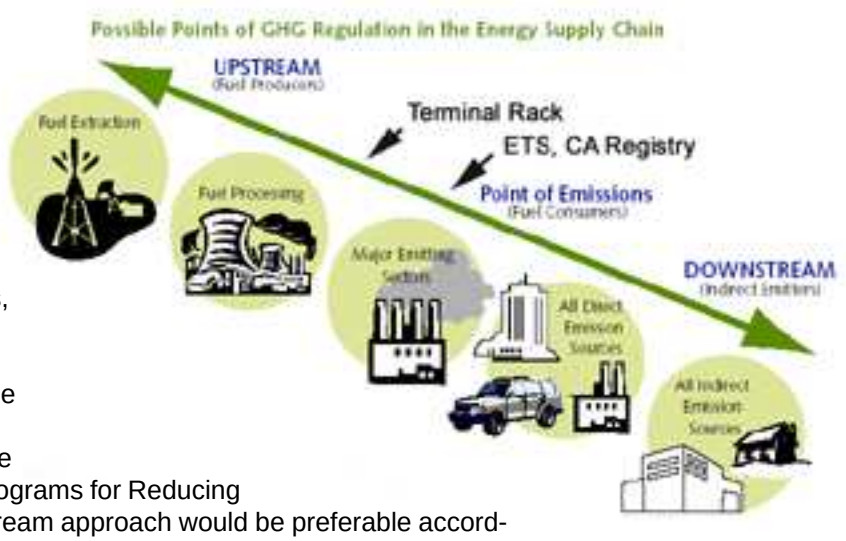
Cap and Trade: Upstream or Downstream?

The terms ***upstream*** **and** ***downstream*** refer to the location in the economy where the fossil fuels are regulated. Upstream is where the fossil fuel first enters the economy. For example, an upstream system would require fossil fuel importers to hold permits for fossil fuel brought into California at the dock when an oil tanker unloads, or at the pipeline. Downstream is closer to consumer end uses, such as a gas station, or a retail business.



A major question in designing a cap and trade system is who gets regulated: upstream or downstream? A Congressional Budget Office study titled "Evaluation of Cap-and-Trade Programs for Reducing U.S. Carbon Emissions" states that "an upstream approach would be preferable according to several criteria, including administrative simplicity and consistent pricing of emissions throughout the economy, which would help achieve allocational efficiency."

Reasons to regulate Upstream:

· **Administrative ease:** Carbon entering into the economy equals carbon emitted. Administratively it is easier to limit carbon as it enters the economy in a few places (by boat or at the wellhead), than as it leaves through millions of tailpipes and smokestacks. Fossil fuel imports are already monitored closely, which facilitates data collection. Regulating the upstream companies greatly simplifies the reporting requirements, since there are fewer companies upstream, making emissions easier to track.

· **Comprehensive:** AB32 calls for a market that is comprehensive. The easiest way to ensure a comprehensive market is to regulate fossil fuels at the point at which they enter the California economy. The system would regulate fossil fuel importers and producers.

The Terminal Rack: A convenient place to regulate motor fuels in California

The Terminal Rack is a point in the motor fuel distribution chain where tanker trucks are filled for distribution to gas stations. Federal motor fuels taxes are collected at this point, and there is an administrative system in place for monitoring the sale of fuels at this point. Since fossil fuels used for transportation accounts for about 50% of CA emissions, it is a very important place.

Permits would be required to be held only by fossil fuel producers and importers. Other (downstream) businesses would still receive the price signal in proportion to their fuel use, but would not need to hold permits or participate in complex reporting and compliance.

In an upstream system, are downstream businesses or households off the hook?

No. There is still an economy-wide cap, but in an upstream system permits are required to be held only by fossil fuel producers and importers. All other businesses and citizens would not need to hold permits. But, upstream companies will pass on the cost of the permits to their customers, so you will feel the price signal. This is the economic system telling you that carbon now has a price. An important part of the program will be compensating consumers through a rebate, to ensure that poor and disadvantaged communities are not overly burdened.

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Cap and Trade: Allocation of Allowances

The single most important market design issue in a new cap and trade system is how to allocate carbon allowances/permits. The 'who' and 'how' of allocation could determine the success or failure of a future cap and trade system.

Who gets the emissions rights?

Government?

Industry?

1) Auction (selling): The State could sell the rights to the highest bidder, then use the proceeds to fund public goods such as energy efficiency or renewable energy to reduce more greenhouse gases, or provide cash dividends to consumers.

Instead of a giveaway, the state auctions permits to companies for whatever the market will bear

- The state uses the auction revenue for:
  - Investment in new energy infrastructure and other public goods
  - Rebates or dividends to consumers

- Auctioning avoids windfalls for oil companies and large emitters.
- Auctioning avoids lobbying for preferential treatment. Every carbon emitter is treated equally.
- With auction revenue, the state can return money to consumers.

2) Giveaway (grandfathering): Emission permits are given to fossil fuel companies for free.

Studies show that even though fossil fuel companies are given permits for free, they raise prices anyway. This option has provided windfall profits to oil and coal companies in Europe.

- The more a corporation emitted in the past, the more permits it gets.
- Value created by scarcity is captured by shareholders of large corporations.
- Industry windfalls would be so large (and they'd rise as the cap declines) that public support for a carbon cap would collapse.
- The receiving corporations can sell their permits or raise their prices to capture the value of the permits.
- Result: windfall profits for the fossil fuel industry, and no public benefit.

The best allocation method for California will:

- Create a fair, equitable market,
- Achieve maximum reductions at the lowest possible cost,
- Shield the most vulnerable citizens from disproportionate economic impacts,
- Avoid the problems faced by the European Trading System (ETS) and RECLAIM.

All the economic literature states that an auction carries fewer social costs than a giveaway.

Note: Allocation could also go directly to consumers. For more information, check www.carbonshare.org.

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How to spend the revenues from an auction?

If the State adopts a carbon market and auctions permits to companies, it could generate a steady income stream of $2.5 billion per year. How should we spend it? Because the climate is a public trust resource, any income derived from its use should be used in the public interest. The revenues from an auction can be used to provide additional emission reductions to meet California's climate goals, and to compensate disproportionately impacted communities. In other words, revenues can be spent on public goods, and to compensate consumers.

Energy/Environment

Revenues can be used for the administration and enforcement of the cap. Also, they can fund additional Energy and Environmental projects that help the State achieve its climate protection goals.

In general, these projects could fall into the following categories:

- Energy efficiency,
- Public transit
- Research and development

Within those categories, revenues could be spent on:

- Big ticket items (trains, transit, infrastructure)
- Small ticket items (decentralized solar incentives, Energy Star appliance retrofits)
- Research and development for new technology
- Adaptation (levees, dams, emergency preparedness for climate events)

Equity

A high priority is compensating citizens for higher energy prices, and reducing impacts on specific communities including environmental justice. Limiting carbon emissions will necessarily raise fossil fuel prices. These higher prices can be offset by distributing 'dividends' or 'carbon shares.' Failure to offset higher prices will harm the economy and low-income households particularly.

Equity goals can be achieved through any or all of the following methods:

- Expanding the Earned Income Tax Credit
- A Per capita cash rebate/dividend
- An earmarked rebate (a coupon, "climate-friendly food stamps" which can only be used to purchase Energy Star appliances, transit passes, hybrid vehicles,)
- Set-asides for specific communities ("good green jobs in the inner city"?)

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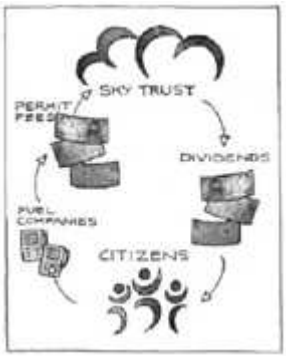
Two Types of Consumer Compensation

Consumer compensation acts as a rebate for the higher fuel or energy prices which may result from a carbon cap. Equal per capita compensation addresses the regressive impacts of fuel price increases. Consumer compensation may be key to maintain political support for the cap over time.

Auction/Dividend

In Auction with Dividends, the State auctions emission rights to the highest bidder, then uses the proceeds to provide cash dividends to citizens on a per capita basis.



Carbon Share

In Carbon Share, emissions permits are allocated directly to Californians on a per capita basis. People cash the share at a bank or brokerage. The bank or broker sells the share to carbon importers and producers on the open market.

What's the difference?

Government runs the auction.
Brokers may represent companies, but most commercial banks are not involved.
Dividends can be wired directly to bank accounts.

Government regulates a private market.
Financial services industry is involved.
Consumers can choose to withhold their share, or "play the market."
People may feel greater sense of ownership but require financial acumen.

Benefits of both the Dividend and Carbon Share:

- State citizens would have a stake in climate protection
- The share or dividend offsets higher energy prices residents may pay
- The share or dividend helps low-income people, who typically emit less carbon.
- If Auction/Dividend and Carbon Share are both adopted, companies would have two sources for permits: the government auction and a private market
- Per capita framework can be easily explained when other states create similar systems

Auction (sell) permits, then include per capita compensation:

The Climate Protection Campaign recommends that the State auctions (sells) 100% of carbon emission permits. Use revenues for public goods and per capita compensation. Consider the Dividend, Carbon Share and other forms of citizen per capita compensation in the design of a California carbon market.

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